



Rowland

HIGHWAYS CONSTRUCTION MANAGEMENT PLAN

for

Residential Development of 146 New Dwellings at Wadacre Farm, Melling

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SITE DESCRIPTION

The proposed development is for 146 detached, semi-detached and mews terraced houses, including roads, sewers and open space, at Wadacre Farm, Chapel Lane, Melling, with access to the development being taken from Chapel Lane.

Works comprise the demolition of the existing buildings on site for a period of up to two months, followed by the construction of the site entrance works and the initial roads and sewers for a period of approximately two months, followed by the commencement of construction of the houses, site infrastructure and implementation of open space.

Works will be carried out all year round and are expected to last for up to five years.

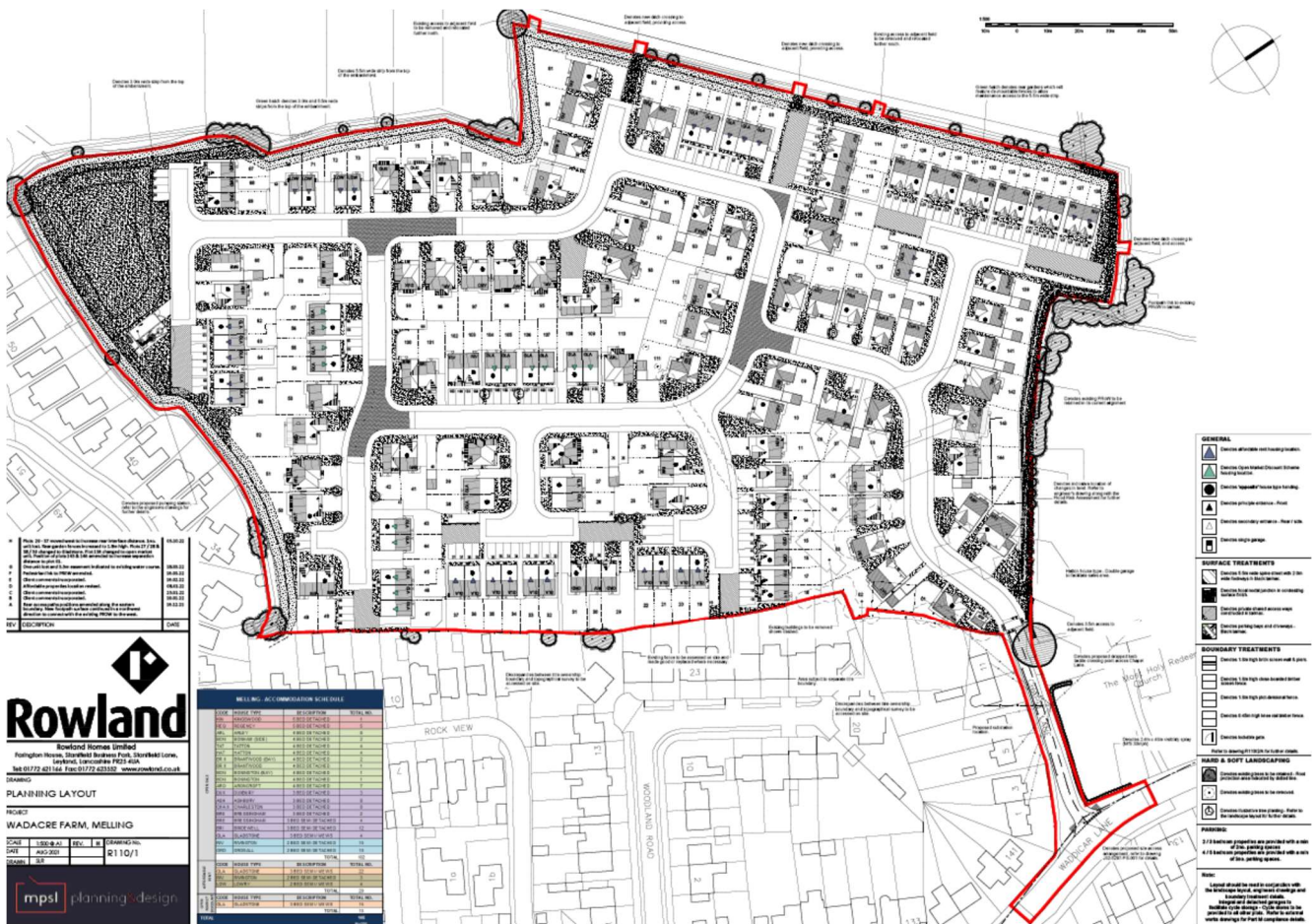
Detailed Pre-Construction Information and a Construction Health & Safety Plan will be produced prior to works commencing on site.

No works will be carried out outside of the hours specified in this document to ensure noise disruptions are kept to a minimum. Particularly noisy plant use will be kept to normal day time hours and will be avoided at unsociable times such as early morning.

SITE LOCATION PLAN



DEVELOPMENT LAYOUT



PROPOSED CONSTRUCTION ACCESS ARRANGEMENTS

Chapel Lane, off Waddicar Lane, will be utilised for all site traffic access and egress as shown on the Development Layout.

There shall be no parking or stopping on Waddicar Lane or Chapel Lane.

Waddicar Lane and Chapel Lane to be kept free from traffic.

Waddicar Lane and Chapel Lane to be kept free from mud and debris at all times.

All footpaths to be identified and kept clear for pedestrian access.

Pedestrians to be separated from site hazards by means of appropriate fencing or barriers.

Separate pedestrian entrance to be provided onto site.

Crossing Points to be provided across site entrance and to display appropriate warning signage to warn of Pedestrian and Vehicle movements.

Site entrance to be kept clean and free of debris.

Signage to be erected at the site entrance advising the permitted times for all work and deliveries.

All visitors, contractors and staff to report to site office upon arrival and sign in.

Traffic Management Plan to be updated regularly during the course of development and to be displayed in a prominent position on site for all to see when reporting to the site office and signing in.

All visitors' / contractors' vehicles are to park in designated areas on site.

All site operatives / visitors to be inducted upon arrival with emphasis placed on the rules and regulations regards to the traffic management system and exclusion Zones.

15mph speed limit in force on site roads.

All contractors to be advised of traffic management system and exclusion Zones on all orders.

All employees, contractors and visitors to wear high visibility vests or jackets on site, along with appropriate footwear and helmets.

Entrance roads to be kept clean and free of obstructions.

Pedestrians to be separated from traffic on site by means of suitable barriers.

Waddicar Lane to display appropriate warning signage (e.g. Danger Site Entrance).

DELIVERIES

No deliveries associated with the development are to take place before 08:00 hrs or after 18:00 hrs Monday to Friday.

No deliveries associated with the development are to take place before 08:00 hrs or after 13:00 hrs on Saturday.

No deliveries on Sundays or Bank Holidays.

All deliveries to be advised to site 24 hours prior to delivery.

Restrictions on delivery times to be advised to all suppliers on official orders along with traffic management rules and regulations prior to delivery to site.

HOURS OF WORKING

General construction work to take place between 08:00 and 18:00 hrs Monday to Friday and 08:00 and 13:00 hrs on Saturday, although construction staff will be arriving before and leaving after these times.

APPROPRIATE MITIGATION MEASURES TO PREVENT UNNECESSARY DISTURBANCE TO NEIGHBOURING RESIDENTIAL PROPERTIES

The site staff will be informed by the site management that they should be mindful of the existing properties and residents. This will form part of any induction to the development.

We will inform all material suppliers to the site that they are to deliver within the working time constraints and they will also be informed regarding the limited access to the development.

Neighbouring residents will be informed by a letter drop, with contact details, prior to the commencement of each phase of work, namely, demolition, construction of roads and sewers and house building works.

Once the compound has been set up and a phone line is available, Rowland Homes will pass on the contact details to the neighbouring residents, to enable them to contact the site manager if they have any concerns.

We have a visiting Health and Safety Consultant, who will attend site on a monthly basis to ensure that the development complies with all the current safety legislation, in addition to checking that the site adheres to Rowland Homes' Health and Safety Procedures.

It is proposed that the majority of works are carried out during the hours of daylight encompassed within the prescribed hours of working referred to below and that therefore specific construction site lighting is not expected to be required. The site compound will, however, have security lighting. Any lighting on site during the construction phase shall comply with the Guidance Notes of the Institute of Lighting Professionals - Guidance Notes for the Reduction of Obtrusive Light. The above and the the site compound being situated in the middle of the site will minimise lighting of adjacent habitats, including the canal and adjacent woodland area.

Signage to be erected at the site entrance advising the permitted times for all work and deliveries.

MANAGEMENT/OPERATION FOR THE CONSTRUCTION OF THE DWELLINGS

The demolition and then the roads and sewer contractor will have a representative on site controlling their works during the initial work phases on site.

A Rowland Homes Site Manager will then be based at the site and will control all operations during the house building phase of the site.

The site will also be visited by senior staff at Rowland Homes and at regular intervals to ensure the development is compliant with our standards and procedures.

This Highways Construction Management Plan will be sent to all suppliers, contractors and sub-contractors so that they will all be aware of its contents. Copies will also be issued to the Site Manager for its contents to be conveyed to all site staff, site operatives, contractors and sub-contractors when they are inducted on site.

Road sweeping will be utilised on the site and existing highways to minimise dust and debris. Road sweeping will be carried out as and when required, dependent upon the time of year, prevailing weather and what operations are being carried out on the development site. Road sweeping will be utilised particularly during operations when spoil is created on the site and can be transferred on to the surrounding existing highways and when spoil is being brought onto or being removed from the site. Vehicles will also be inspected when leaving the site and a pressure wheel wash will be available to remove dirt from wheels.

CONSTRUCTION NOISE MANAGEMENT

All contractors and subcontractors will be required to follow standard Best Practicable Means (BPM) as outlined in BS 5228-1:2009+A1:2014 and BS 5228-2:2009+A1:2014.

This will include the following:

There shall be no construction works associated with the site outside the following hours:

- Monday – Friday 08:00 – 18:00;
- Saturdays 08:00 – 13:00;
- In addition, no construction work will take place on a Sunday, Bank or Public Holidays without express permission of Sefton Council.

The use of any particularly noisy plant, such as piling rigs, will be limited to normal daytime periods, avoiding anti-social hours such as early in the morning;

A site speed limit of 15mph will be implemented;

Construction/development activities will be organised so that early development provides screening to the nearby noise-sensitive receptors from subsequent operations wherever possible;

Works vehicles will be prohibited from waiting or idling on surrounding roads;

Drivers will ensure that lorry tailgates are shut and locked before leaving tipping or drop off areas;

Electrical items of plant will be used instead of diesel plant where possible;

Plant will be started up sequentially rather than all together;

Loading/unloading activities will be located away from sensitive receptors;

Drop heights of materials will be minimised;

Continuous noisy plant will be housed in acoustic enclosures, where practicable;

Exhaust silencing and plant muffing equipment will be fitted and maintained in good working order;

Static plant known to generate sufficient levels of vibration will be fitted with vibration dampening features;

Each item of plant will be carefully selected so as to comply with the noise limits quoted in the relevant European Commission Directive 2000/14/EC/United

Kingdom Statutory Instrument (SI) 2001/17013;

Consideration will be given to the recommendations set out in Annex B (Noise sources, remedies and their effectiveness) of Part 1 of BS 5228;

Equipment will be well-maintained and where possible will be used in the mode of operation that minimises noise;

Plant and equipment will be shut down when not in use;

Semi-static equipment will be sites and orientated as far as is reasonably practicable away from occupied buildings and, where feasible, will be fitted with suitable enclosures;

Materials will be handles in a manner that minimises noise;

All appropriate contractor personnel will be instructed on BPM measures to reduce noise and vibration as part of their induction training, and followed up by 'toolbox' talks;

Noisy activities will be staggered in time and space where feasible;

The site layout (on site construction traffic routes) will be designed to minimise the need for reversing;

Only designated haul routes (on site) will be used, whilst they are not intended to be hard surfaced, they will be maintained to such a standard that they will be free from pot holes and noise generating imperfections;

The Site Manager's details will be clearly displayed on site to provide the opportunity for the local community to raise their concerns if issues with site activities, such as noisy conditions, are causing a nuisance. This contact number will be included in a written notification to the public prior to commencing works.

Reversing

The contractor will manage the noise from reversing alarms will be managed by means of the following:

The site layout will be designed to limit and, where reasonably practicable, avoid the need for the reversing of vehicles;

A banksman will be utilised to avoid the use of reversing alarms;

Reversing alarms will be set to the minimum output noise level required for health and safety compliance.

Noise Insulation

Annex E of BS 5228-1+A1 provides criteria for the assessment of significance of construction noise. Exceedances of threshold levels trigger a responsibility to provide noise insulation or a scheme to facilitate temporary rehousing.

This represents additional protection for a residential property in the event that it is not practical to mitigate construction noise on site, or reduce its exposure durations to tolerable levels.

The standards suggest that noise insulation should be provided if the trigger levels shown in Table 1 are predicted to be exceeded for a period of ten or more days of working in any 15 consecutive days, or for a total number of days exceeding 40 in any six-month period.

Table 1 Noise Insulation Triggers. Source: Annex E of BS 5228-1+A1

Day	Relevant Time Period	Averaging Time, T	N Noise Insulation Trigger Level, dB LAeq, T 1	Temporary Re-housing Trigger Level, dB LAeq, T 1
Monday to Friday	07:00 – 08:00	1h	70	80
	08:00 – 18:00	10h	75	85
	18:00 – 19:00	1h	70	80
	19:00 – 22:00	3h	65	75
	22:00 – 07:00	1h	55	65
Saturday	07:00 – 08:00	1h	70	80
	08:00 – 13:00	5h	75	85
	13:00 – 14:00	1h	70	80
	14:00 – 22:00	3h	65	75
	22:00 – 07:00	1h	55	65
Sunday and Public Holidays	07:00 – 21:00	1h	65	75
	21:00 – 07:00	1h	55	65

CONSTRUCTION VIBRATION MANAGEMENT

The following best practice methods of work are to be adopted for any vibration-generating operations during construction:

Where reasonably practicable, plant and/or methods of work causing significant levels of vibration at sensitive premises should be replaced by other, less intrusive, plant and/or methods of working to reduce the potential effects resulting from construction generated vibration and such measures may include:

- Adoption of low vibration working methods. Consideration should be given to use of the most suitable plant;
- Where processes could potentially give rise to significant levels of vibration, on-site vibration levels should be monitored regularly;
- In areas of piling any obstructions should first be removed, wherever possible;
- Reduction of energy input per blow (applicable to piling);
- Vibration monitoring is to be carried out close to vibration-sensitive receptors during any possible piling works.

Working hours should be restricted to periods where local residents are less at risk from disturbance, i.e. during the day when local residents are at work;

Good site practice and appropriate supervision to keep vibration levels to a minimum;

Whilst haul roads are not intended to be hard surfaced, they will be maintained to such a standard that they will be free from pot holes and vibration generating imperfections;

All plant should be properly maintained, any defective plant should be replaced immediately;

Good community liaison should be maintained, vibration levels are more tolerable if they are expected.

CONSTRUCTION DUST MANAGEMENT

Activities undertaken during the construction phase of a development have the potential to generate fugitive dust emissions. The site is located on the edge of a residential area and mitigation measures will therefore be needed to reduce dust effects beyond the site boundary. These are intended to be stringent but achievable and in line with Best Practicable Means (BPM).

Suitable mitigation measures have been identified through a review of The Greater London Authority 'Best Practice Guidance: The Control of Dust and Emissions from Construction'. Rowland Homes Limited will ensure that all on-site contractors follow BPM at all times to minimise dust emissions. These are set out in the following Sections.

It should be noted that there will be no construction works outside the following hours:

- Monday – Friday 08:00 – 18:00;
- Saturdays 08:00 – 13:00.

Less noisy internal works could be being carried out outside of these hours.

2.1 Preparation

2.1.1 Site Preparation

Machinery, fuel storage and dust generating will be located away from the site boundary and sensitive receptor locations as far as practicable.

2.1.2 Training, Awareness and Competency

All site personnel will receive training on health and safety, BPM and site housekeeping. Inclusion of these items as part of site induction training should be considered. Additionally, all staff will be aware of reporting procedures and a trained and responsible Site Manager will be on site during working hours to carry out any necessary inspections. The Site Manager will be available to address any public concern throughout the construction of the development and his details will be clearly displayed on the site.

2.2 Site Planning

2.2.1 Site Layout

Careful consideration should be given to site layout and, where possible, dust generating activities are to be located away from the boundary and sensitive receptor locations. However, it should be noted that due to the nature of construction this will not always be possible.

2.2.2 Haul Roads

Un-paved haul roads can account for a significant proportion of fugitive dust emissions. However, due to the size of the site it is not proposed to provide hard surfacing. This may be reviewed if complaints are received and the most significant source of dust is identified as on site vehicle movements.

2.2.3 Dust Suppression

All routes within the site are to be scraped, water sprayed and swept clean as necessary.

It is necessary to continuously monitor for dust throughout the day. This will be in the form of visual inspections undertaken by the Site Manager. Records of any significant emissions or impacts will be maintained.

2.3 Construction Traffic

2.3.1 Site Entrance

The access to the site is from Chapel Lane. The number of vehicles entering and leaving the site will be limited as far as possible to reduce dust impacts at this location.

2.3.2 Vehicle Speed Limits

An appropriate speed limit of **15 miles per hour** is to be implemented on site to reduce dust re-suspension from road vehicles.

2.3.3 Prevention of Dust from Vehicle Movements

Vehicles leaving the site have the potential to transport dust beyond the boundary through trackout. There will be procedures for effective cleaning and inspection of vehicles upon leaving the site.

As with haul roads, the entrance and exit to the site is to be cleaned as necessary.

Vehicles carrying dusty materials are to be securely covered and information about vehicles entering and leaving the site, and their loads, is to be recorded by the Site Manager.

2.3.4 Reduction of Vehicle Emissions

Vehicles will avoid leaving engines idling and queuing of vehicles entering the site will be controlled.

2.4 Site Activities

All site activities will be undertaken in accordance with an approved Method

Statement produced by the relevant contractor. This will consider potential dust emissions where relevant.

2.4.1 Excavation and Earthworks

Excavation and earthworks will be undertaken throughout the site in order to prepare the foundations for the relevant plots. Significant earth moving works will not take place on dry or windy days if variations to construction programme are possible. Where applicable, water is to be used as a dust suppressant during excavation and earth moving activities. Any exposed areas will be re-vegetated as the development progresses. Physical screening of soils will be a contained process.

2.4.2 Stockpiling

Stockpiles are to be kept for the shortest possible time and the height minimised. The predominant wind direction will be taken into account when siting stockpiles to reduce the likelihood of effects upon sensitive receptors. Regular checks for dust will be carried out by the Site Manager to prevent dust build up.

2.4.3 Site Machinery

The use of diesel and petrol powered generators will be minimised by using mains electricity as a power source for site machinery as far as possible.

2.4.4 Cutting, Grinding and Sawing

Cutting, grinding and sawing activities will not be conducted on site where possible and pre-fabricated material will be imported. If cutting, grinding and sawing on site is necessary, all equipment will have either water suppressants or dust extraction systems installed.

2.4.5 Fitting Out

All machinery for activities such as plastering, sanding and rendering are to be fitted with dust suppression and/or collection equipment.

2.4.6 Waste Disposal

As referred to elsewhere in this document the management of waste resulting from construction work is dealt with at site level and is collected by a specialist waste disposal contractor. Waste resulting from construction work is partially segregated and collected in skips on site. The waste is collected by the specialist waste disposal contractor who then separates the different types of waste to be recycled in the relevant manner. The specialist waste disposal contractor supplies regular waste analysis reports. More than 90% of waste from Rowland Homes' construction sites is recycled with little or no waste going to landfill. Burning of any materials will not be permitted on site.

2.5 Summary of Mitigation Measures

Reference should be made to Table 2 below for a summary of mitigation measures to be implemented on the site.

Table 2 Summary of Dust Mitigation Measures

Issue	Control Measure
Site planning	<ul style="list-style-type: none">• No bonfires• Plan site layout – machinery and dust causing activities will be located away from sensitive receptors• All site personnel to be fully trained• Trained and responsible manager on site during working times to record activities and carry out site inspections
Construction traffic	<ul style="list-style-type: none">• Vehicles to avoid leaving engines idling• Effective vehicle cleaning and specific wheel washing on leaving site and damping down of haul routes• All loads entering and leaving site to be covered• Avoid site runoff of water or mud• On-road vehicles to comply to set emission standards• Minimise movement of construction traffic around site• Hard surfacing and effective cleaning of haul routes• A site speed limit of 15 miles per hour to be implemented
Earthworks	<ul style="list-style-type: none">• Minimise dust generating activities• Use water as dust suppressant where applicable• Re-vegetate earthworks and exposed areas
Construction works	<ul style="list-style-type: none">• On-site cutting, grinding and sawing activities to use water suppressant or appropriate dust extraction systems• Machinery for plastering, sanding or rendering to be fitted with dust suppression/collection equipment